

ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDCAR0L000

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Paronychia sessiliflora*  
**COMMON NAME:** High Plains Whitlow Wort, Low Nailwort  
**SYNONYMS:** none  
**FAMILY:** Caryophyllaceae

**AUTHOR, PLACE OF PUBLICATION:** Nuttall, Thomas. The Genera of North American Plants 1:160. 1818.

**TYPE LOCALITY:**

**TYPE SPECIMEN:**

**TAXONOMIC UNIQUENESS:** There are 28 species of *Paronychia* in the United States and another 17 subspecies or varieties. There are two species found in Arizona: *Paronychia Jamesii* and *P. sessiliflora*.

**DESCRIPTION:** **Plants** perennial, densely caespitose and mat-forming; caudex branched, woody. **Stems** erect to ascending, branched proximally, 5-25 cm, hirtellous. **Leaves:** stipules lanceolate to subulate, 2-3 mm, apex long-acuminate, often deeply cleft; blade linear-subulate, 4-7.5 × 0.5-0.8 mm, leathery, apex acute or shortly cuspidate-mucronate, very finely puberulent to glabrous. **Cymes** terminal, 3-6-flowered, congested, or flowers solitary. **Flowers** 5-merous, ± ovoid, with enlarged hypanthium and calyx narrowing distally, 3.6-5 mm, moderately pubescent with silky to stiff, antrorse to somewhat spreading hairs; sepals green to red-brown, midrib and lateral pair of veins prominent, lanceolate-oblong, 1.5-2 mm, leathery, margins whitish to translucent, 0.1-0.2 mm wide, scarious, apex terminated by awn, hood ± obscure, narrowly rounded, awn erect to somewhat spreading, 1-1.5(-2) mm, narrowly conic in proximal 2 with white, scabrous spine; staminodes filiform, 0.7-1 mm; style 1, cleft in distal 1/ 5, 1.4-1.5 mm. **Utricles** ovoid-oblong, 1.3-1.4 mm, densely pubescent in distal 1/ 2 (Flora of North American 2014).

**AIDS TO IDENTIFICATION:** The Caryophyllaceae, or Pink Family, contains some garden favorites like the pinks and carnations. The genus *Paronychia* is distinguished by having a 1-seeded achene or utricle. Both *P. sessiliflora* and *P. jamesii* are strongly perennial, with the former having 1-6 sessile flowers, and the latter having more than 7 pedicellate flowers (Flora of North America 2014).

**ILLUSTRATIONS:**

Photos: [http://swbiodiversity.org/seinet/taxa/index.php?taxon=Paronychia sessiliflora](http://swbiodiversity.org/seinet/taxa/index.php?taxon=Paronychia_sessiliflora).

Photos: <http://eol.org/pages/587181/media>.

**TOTAL RANGE:** Distribution centers in the central US and the Rocky Mountains. From Alberta and Saskatchewan in Canada south to Arizona, New Mexico and Texas. Also found in Nevada but not Kansas.

**RANGE WITHIN ARIZONA:** Of 18 collections in Arizona, the majority are from the eastern Grand Canyon, both north and south rims. A couple of collections are further north from the Kaibab and Paria Plateaus. Additional collections sites are further east into the Navajo Nation lands and south near Meteor Crater and the Mogollon Rim. All collections are within Coconino County except a single site in NW Navajo County.

**SPECIES BIOLOGY AND POPULATION TRENDS**

**GROWTH FORM:** A prostrate (mat-forming) perennial herbaceous plant with a woody caudex.

**PHENOLOGY:** Notes from Arizona collections indicate that *P. sessiliflora* flowers from May to September; fruits were noted in July and August. Given the range of elevations where the species has been collected in Arizona, this factor can be expected to influence flowering and fruiting times.

**BIOLOGY:**

**HABITAT:** Dry, stony hillsides, summits, and sandstone mesas. Numerous Arizona collections also suggest a preference for limestone bedrock and derived soils.

**ELEVATION:** Collections made in Arizona range from 4500 – 8900 feet (1370-2700m).

**EXPOSURE:** One record noted an open, sunny exposure; another, a western exposure.

**SUBSTRATE:** Soils derived from both sandstone and limestone including sand dunes and sand pockets in sandstone, and cracks in limestone bedrock and limestone chip soils.

**PLANT COMMUNITY:** From Great Basin desertscrub to mixed conifer in Arizona. Associated species include: *Pinus ponderosa*, *Abies concolor*, *Artemisia frigida*, *Petradoria pumila*, *Artemisia nova*, *Ephedra*, *Astragalus cremnophylax*, *Hymenoxys acaulis*, *Cowania mexicana*, *Fallugia paradoxa*, *Rhus trolobata*, *Artemisia bigelovii*, *Castilleja chromosa*, *Juniperus monosperma*, *Gutierrezia sarothrae*, *Opuntia*, *Astragalus kentropinta*, *Arenaria fendleri*, *Stipa comata*, *Chrysothamnus parryi*, *Yucca augustissima*, *Bouteloua gracilis*, *Pinus edulis*, *Crypthantha*, *Chrysothamnus nauseosus*, *Psilostrophe sparsiflora*, *Leucelene*

*ericoides*, *Yucca baccata*, *Eriogonum*, *Sphaeralcea*, *Erigeron utahensis*, *Stanleya pinnata*, *Dyssodia pentachaeta*.

**POPULATION HISTORY AND TRENDS:** Not known for Arizona. *P. sessiliflora* was first collected in the State in 1938, and recollected from the same area in 2001. There were a few more collections in the 1970s, and the remainder from the 1990s to present. A couple of the collections noted that the plant was rare, another stated the plant was locally frequent, and another noted 30-40 plants. Range-wide, the species is considered secure or apparently secure in parts of its northern range (SK, MT, WY and NE), and critically imperiled in some states at the southern end of its range (AZ and OK).

## **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None.  
**STATE STATUS:** None.  
**OTHER STATUS:** None.

**MANAGEMENT FACTORS:** None specified.

**PROTECTIVE MEASURES TAKEN:** None.

**SUGGESTED PROJECTS:** Alert field botanists to be on the lookout for this species and note if additional collections and distributions can be identified. Consider re-visiting some of the previously collected sites to determine if the plant is still extant. Any collection should include an estimate of population size and extent.

**LAND MANAGEMENT/OWNERSHIP:** Half of the collections are on US National Park Service land in the Grand Canyon National Park. Another three are on Navajo Nation lands. The remainder are on US Forest Service lands in Kaibab and Coconino National Forests, the BLM Arizona Strip and private land.

## **SOURCES OF FURTHER INFORMATION**

### **REFERENCES:**

- Flora of North America, accessed 7/14/2014,  
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NatureServe Explorer, an Online Encyclopedia of Life, accessed 7/15/2014,  
[http://explorer.natureserve.org/servlet/NatureServe?loadTemplate=tabular\\_report.wmt&aging=home&save=all&sourceTemplate=reviewMiddle.wmt](http://explorer.natureserve.org/servlet/NatureServe?loadTemplate=tabular_report.wmt&aging=home&save=all&sourceTemplate=reviewMiddle.wmt).  
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**MAJOR KNOWLEDGEABLE INDIVIDUALS:**

**ADDITIONAL INFORMATION:**

**Revised:** 2014-07-15 BDT

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